

Chapter 6

Deliver

The DELIVER function of the targeting process executes the target attack guidance and supports the operation once the HPTs are located and identified. The attack of targets must satisfy the attack guidance developed in the DECIDE function. This guidance is divided into two categories: tactical and technical decisions. Throughout this chapter we will refer to the tasker agency; generally this refers to the TA team at the brigade TOC. Other tasking agencies can be the General Support Operations Center (GSOC), G3, and ACE.

TACTICAL DECISIONS

6-1. Tactical decisions determine the—

- Time of the attack.
- Desired effect.
- Degree of damage, or both.
- Attack system to be used.

6-2. On the basis of these tactical decisions, the technical decisions describe the—

- Number and type of munitions.
- Units to conduct the attack.
- Response time of the attacking unit.

6-3. These decisions result in the physical attack of the targets by lethal and/or nonlethal means. For more information on targeting methodology, see FM 6-20-10, Chapter 2.

TECHNICAL DECISIONS

6-4. In the DELIVER phase EA includes conducting and reporting EA functions. This process is linear and continuous; each step is vital to the overall effectiveness of EA. EA cannot be a battlefield multiplier if it does not have continuous ES along with SIGINT team intelligence support. Different techniques against different units will give varying results. Terrain will influence these results; it is critical to use terrain to augment the mission of EA. In defense operations the ability to deny communication when a unit arrives at an obstacle is an overwhelming battlefield multiplier. The necessity of reporting the techniques and the threat reaction also will provide

a baseline for future missions. In an environment rich with signals, it is imperative that EA is delivered with precision and overpowering force. Figure 6-1 shows an example of using ingress routes into division or brigade AOs.

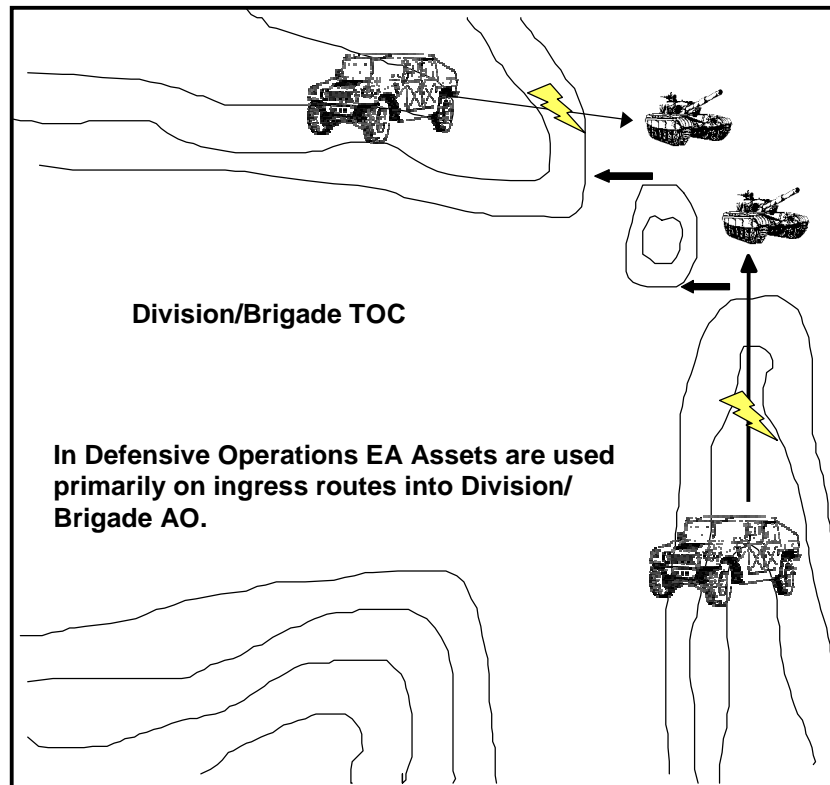


Figure 6-1. Division or Brigade TOCs

CONDUCT ELECTRONIC ATTACK

6-5. This operation has three functions. **Acquire target, reappraise and apply jamming equation, and jam target.**

ACQUIRE TARGET

6-6. This function has three steps: **Confirm target technical parameters, monitor target frequency, and confirm target acquisition.**

Confirm Target Technical Parameters

6-7. This step consists of three tasks:

- Confirm target frequency. The team leader will confirm with the TA team or POC the specific target frequency and ensure if jump frequencies were used that they were provided with jump sequence and correct jump frequencies.

- Confirm spectrum scan segments. The team leader will next use the scan function on the system to determine the exact frequency. This process is done because recalibration of a system is rare and the frequency may not correspond exactly.
- Confirm continued monitoring of target. The operator or team leader will confirm with the TA team the continued monitoring of targets.

Monitor Target Frequency

6-8. This step has three interrelated steps:

- Monitor designated frequency. The operator will monitor the frequency.
- Monitor designated scan sectors. The operator will monitor the particular sectors to ensure the system is still on target for the exact frequency.
- Revisit target frequency. The operator will periodically check on the target. How often the asset revisits the target is determined by the number of targets and the SIGINT team.

Confirm Target Acquisition

6-9. This step has four sequential steps:

- Acquire signal. This task is covered in the previous section.
- Identify signal. The operator will identify the particular signals with data passed by the SIGINT team.
- Confirm signal is designated target. The operator will use this data to confirm that the target is the same target passed by the SIGINT team. Examples of this confirmation would be callsigns, jargon, language, and essential elements of information.
- Confirm signal is preplanned target or target of opportunity. The operator will confirm that the target is either a preplanned target or a target of opportunity. This task is the last confirmation that the target is the correct target.

REAPPRAISE AND APPLY JAMMING EQUATION

6-10. This function will be performed by the SIGINT team to ensure that the EA asset can acquire the target and the target will be within range of the EA asset. The jamming equation will give the SIGINT team a range of each EA system with regard to particular emitters and receivers. Doctrine and equipment capabilities dictate quick and overpowering EA attack; therefore, this equation is not used for minimum power. An example of this are targets of opportunity. The EA team will not have the time to perform the equation and fine-tune the EA asset to hit the target with minimum power (minimize the asset's signature). The requirement for this technique is no longer valid because these assets deliver quick overpowering attacks.

JAM TARGET

6-11. This function has four steps.

Review Jamming Control

6-12. This step will ensure that there is a "stop jam" frequency being monitored by the system.

Program Jamming Power Output

6-13. This step will pass from the tasker to the jammer the power output for the system. This step is usually bypassed with the assumption that maximum power for precise overpowering EA will be used.

Jam Target Using Predetermined Techniques

6-14. This step will direct the EA system in the particular techniques to use. There are four basic techniques: **deception**, **jamming**, **masking**, and **DE**.

6-15. **Deception.** EM deception is the deliberate radiation, reradiation, alteration, suppression, absorption, denial, enhancement, or reflection of EM energy in a manner intended to convey misleading information to an enemy or to enemy EM-dependent weapons, thereby degrading or neutralizing the enemy's combat capability. There are three primary types of EM deception:

- Manipulative EM deception, which involves actions to eliminate revealing or to convey misleading EM telltale indicators that may be used by hostile forces.
- Simulative EM deception, which involves actions to simulate friendly, notional, or actual capabilities to mislead enemy forces.
- Imitative EM deception, which introduces EM energy into enemy systems that imitate enemy emissions.

6-16. **Jamming.** EM jamming is the deliberate radiation, reradiation, or reflection of EM energy for the purpose of preventing or reducing an enemy's effective use of the EM spectrum, and with the intent of degrading or neutralizing the enemy's combat capability. Jamming falls into two categories, voice and digital (analog) data. Communications jamming is targeted against hostile voice systems for multiple purposes:

- To introduce delays into the enemy's C² system that allows the friendly commander to fully exploit his options.
- To delay hostile time-sensitive information until it is no longer useful.
- To force the enemy (in conjunction with ES) into actions that are useful to friendly operations. There are three primary types of EM jamming:

An example of EA forcing the enemy into action useful to friendly operations out of encrypted communications through jamming allows ES to gather intelligence from this otherwise secure net and further develops an intelligence baseline.

- Spot Jamming. Spot jamming may be directed at a single frequency or multiple frequency through sequential spot jamming and involves jamming various frequencies one at a time in

sequence. Simultaneous multispot jamming involves jamming several frequencies at the same time. In both spot and sequential spot jamming, the full power of the jammer is directed against one frequency at a time, increasing the effectiveness and range of jammer. Spot jamming is less likely to interfere with friendly communications because receivers and transmitters can easily avoid it by slightly changing (detuning) the frequency they are receiving.

- Sweep Jamming. In sweep jamming, the jammer goes through a frequency range, then repeats the sweep continuously. All frequencies in the range are jammed. Friendly frequencies may be affected unless protected by the Joint Restricted Frequency List (JRFL).
- Barrage Jamming. Barrage jamming, unlike spot jamming, simultaneously spreads the jammer's power over a larger portion of the frequency spectrum, thereby reducing radiated power directed at any single target frequency. Barrage jamming is similar to sweep jamming, since all frequencies are jammed within the targeted portion of the spectrum.

6-17. **Masking.** Electronic masking is the controlled radiation of EM energy on friendly frequencies in a manner to protect the emissions of friendly communications and electronic systems against enemy ES without significantly degrading the operation of friendly systems.

6-18. **Directed Energy.** DE is an umbrella term covering technologies that relate to the production of a beam of concentrated EM energy or atomic or subatomic particles. A DE weapon is a system using DE primarily as a direct means to damage or destroy enemy equipment facilities and personnel. Directed energy warfare (DEW) is military action involving the use of DE weapons, devices, and countermeasures to either cause direct damage or destruction of enemy equipment, facilities, and personnel; or to determine, exploit, reduce, or prevent hostile use of EM spectrum through damage, destruction, and disruption. (See Appendix A for more information on DE in EW.)

Report Inability to Locate Target

6-19. The operator reports the inability to locate the target and therefore to queue ES assets to search for the target or to pass targets to other EA assets.

JUMPING EA ASSETS AFTER EA MISSIONS

6-20. Dependent upon METT-TC, the commander must review the advantages and disadvantages of moving EA systems after EA missions. This decision becomes more critical as threat technology increases.

- Advantages: Jumping systems after each mission increases survivability due to the strong EM signature produced during jamming missions. These signatures are easily located if in the VHF range. When located, ES assets can DF these signatures and provide support

to targeting for lethal fires and various other means to destroy the EA asset.

- Disadvantages: Jumping systems after each mission will dramatically decrease the amount of EA missions which can be accomplished. The tear-down, set-up, and movement time will use up critical resources, specifically time. Due to the necessity of locating EA assets near the FLOT, movement will also expose systems to threat forces in the area of movement. Therefore, the decision to move is balanced against missions and resources.

REPORT ELECTRONIC ATTACK RESULTS

6-21. This operation has two functions: **determine effectiveness** and **prepare and transmit EA report**.

DETERMINE EFFECTIVENESS

6-22. This function has three steps.

Determine Degree of Disruption to Threat Communications

6-23. This step has four tasks:

- Monitor target reaction. In this task the team leader will record and analyze the reaction of the target. The team leader records the specific reaction of enemy forces with the support of an ES asset such as communication phrases (for example, "we are being jammed" "say again," "repeat all after,") or no verbal recognition of voice communications or contradictory acknowledgement. Contradictory acknowledgement (for example, "go to assembly area Bravo" when the original message was assembly area Golf). These statements would mark the conclusion of a successful EA mission.
- Estimate degree of degradation to maneuver. The team leader would once again listen for phrases, which would provide information. The team leader will also look for phrases that indicate delay, disruption, and diversion of maneuver elements (for example, "Mike 14 you are off line," "Mike 14 move back into formation.") If these phrases are repeated to several different units in the element, the EA is effective.
- Estimate degree of degradation of fires. This task can be analyzed if the target is a voice net. With the digital artillery nets, the team leader will not be able to assess effectiveness, but ES systems will be able to monitor the net to see if the jamming is overpowering the signal to the receiver. Also, assessment of the battlefield will reveal if the enemy forces initiated any artillery missions. A forward observer (FO) calling for fire and adjusting fire—
 - Has to repeat coordinate.
 - Is delayed passing adjustments.
 - Adjustments are delayed in firing.

6-24. The team leader will look to see if the mission is performed and the degree of effectiveness. If multiple adjustments over several minutes are not made and the unit moves out of the area, but the FO cannot walk the rounds onto the unit, the EA mission is successful.

- Estimate degree of degradation. The team leader performs this task. This effectiveness is determined by multiple means. Voice analysis identifies similar phrases in the monitoring of target reaction. Also, the team leader will look for indicators that actions are not followed or performed. Another way to estimate degradation is for the ES assets to report the splintering of the net. Throughout these tasks, the ES systems must support the EA personnel orienting the EA systems. It is also critical to support EA assets for effectiveness. For EA systems using encrypted communications channels, the ES system will monitor the net to see if EA overpowers the system and if the voice net drops into the "red." These actions are clear indications of the effectiveness of EA. Many nets will assume bad encryption and simply go "red" to communicate. If this happens, EA may cease and ES begins to gather intelligence until the SIGINT team tasks the EA team to reattack the target.

Prepare EA Rating Table

6-25. This step has two tasks.

- Estimate mission success. The team leader, in conjunction with the ES assets, performs this task to estimate the degree of degradation of communication and noncommunications nets. This will determine the success of mission.
- Describe threat reaction to EA. This reaction is recorded in the determine degree of disruption to threat communications. These reactions are compiled by the tasking agency to give overall enemy reaction to EA.

Prepare to Continue Mission or Begin New Mission

6-26. The SIGINT team will decide whether to continue the mission based upon the EW annex. If the mission is ineffective, the SIGINT team may task the EA asset to employ a different technique or it may pass the mission to other EA assets. If the mission is successful, a determination will be made if the net is still a viable target or to move onto another mission.

PREPARE AND TRANSMIT EA REPORT

6-27. This function has two steps. These steps conclude DELIVER, although this is truly a continuous cycle.

- Transmit effectiveness report. A MAER is sent by the team leader to the tasker to report the overall effectiveness and status (a basic summary) of the missions performed by the EA asset. The MAER—
 - Will queue the SIGINT team for additional missions and any specific reports needed before new missions are begun.

- Will also provide details on the target, target reaction, mission success, and techniques employed.
- Is not only a report on the effectiveness of EA but also upon the reaction of enemy forces to particular techniques.
- Is used to build a database on the use of EA against specific units and their specific reactions and provide EA assets and EWOs more concrete expectations when delivering EA.
- Summarize significant EA mission technical parameters. These technical parameters summarize the frequencies and power used on specific targets.

SUMMARIZE STATUS OF ELECTRONIC ATTACK ASSETS

6-28. This task will provide a basic system status report. The EA system will send a multiple assets status report (MASTR) to the SIGINT team detailing the team status. This will provide the exact status of each EA asset to include the fuel, water, food, and ammunition. When combined with the system status, they give the SIGINT team a complete understanding of the system and its ability to perform additional missions.